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SCHEDULE OF FRENCH SPACE ACTIVITIES FOR 1970

National Center for Space Studies

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National Center for Space Studies  
129 rue de l'Universite  
Paris VIIIe

Mr. R. Cargill Hall  
Historian  
Jet Propulsion Laboratory  
California Institute of Technology  
4800 Oak Grove Drive  
Pasadena, California 91103

Dear Mr. Cargill Hall:

I am pleased to enclose the schedule of French space activities for 1970, for the annual record you prepare in your capacity as co-ordinator for the International Academy of Astronautics.

No references are made to publications as the great majority of cases involve acts in which CNES itself took part.

Sincerely yours,

For the President, CNES  
by delegation  
Deputy Director  
Public Relations

CC:IAA

P.S. A chronological list of all French launchings will be forwarded to you in the near future.

Paris, February 19, 1971

SCHEDULE OF FRENCH SPACE ACTIVITIES FOR 1970

3 February, 1970	Launching of <u>Belier</u> I rocket from the Guyana Space Center for experimentation on the new Kourou launch site (French Guyana).
From 2 February to end of March	French-Russian project of research on magnetosphere, ionosphere and auroral radiation at two conjugate magnetic points, Sogra (USSR) and Kerguelen Islands (France).
12 February	Franco-Brazilian convention (CNES/CNAE) on operation of the Guyana Space Center's down-range station at Fortaleza (Brazil).
March	Long-term stratospheric balloon launching project at Pretoria (South Africa).
10 March	First launching from the Guyana Space Center of the Diamant B rocket to put the German Dial/Wika payload in orbit and thus qualify the Guyana Space Station installations. Opening of the Fortaleza (Brazil) station on the same date for that launching.

5-6 May International information days on stratospheric balloon experiments (10 nations represented) at Aire-sur-l'Adour (Landes).

6 May Launching of a French Dragon I rocket from the Mar Chiquita (Argentina) site for measurements of electronic density.

20-29 May Cospar meeting at Leningrad (USSR): Proposal of international Isagex program.

29 May-4 July Launching project of 34 stratospheric balloons from the Gap Tallard (Hautes-Alpes) site for French, Dutch and Italian experimenters: research on cosmic rays, research on the Sun and the nocturnal sky in the infrared and ultraviolet ranges. (France is leading the countries of Western Europe in the exploitation of this method of space exploration).

12 June Agreement signed between CNES and NASA, each of these organizations putting at the disposal of the other its network of tracking stations, data transmission and satellite guidance stations to the extent available.

12 June The Council of the International Aeronautics Federation awarded CNES a certificate of merit for its work and results since its creation. (NASA obtained the prize in 1967).

12 June French participation in the launching of Europa F 9 of Cecles-Eldo from Woomera (Australia); the French 2<sup>nd</sup> stage functioned correctly and nominally.

26 June	A pressurized balloon released May 26, 1969 as part of the Pretoria III campaign organized by CNES in South Africa was still heard on May 28, 1970 by stations of the French network. In preparation for the Eole project, this plan aimed at checking the lifetime of balloons at 150 and 200 millibars. It was the first time a long-life balloon launched below 400 millibars and reaching a ceiling at 150 millibars lasted for more than a year.
13 July	NASA decides to begin an experiment for the Space Astronomy Laboratory of Marseilles aboard the orbital <u>Skylab</u> station. The only foreign experiment on that station.
22 July and 6 August	France-German contracts (CNES/GfW) on tracking and remote control of the German Azur satellite launched by NASA.
5 and 31 August	Agreement memorandum by exchange of letters (request by NASA on 5 <sup>th</sup> , agreement by CNES on 31 <sup>st</sup> ) for NASA use of Guyana Space Center for launching of weather-probe rockets in 1971.
7 August - 24 September	Agreement memorandum, by exchange of letters, with NASA for introduction of an experiment for the Stellar and Planetary Physics Laboratory on the OSO I satellite, to take up more than half the pointed part of the satellite.
21 September	Opening of the Mendoza (Argentina) station for French launchings under the Eole balloon program.

22 September	Cooperation agreement signed between CNES and the Department of Science and Technology of the General Secretariat of the League of Arab States in anticipation of collaboration in scientific and technological applications of space research and mutual information on programs.
2 October	CNES/NASA agreement for a common project of rocket probe launchings from the Guyana Space Center.
25 October	Agreement and protocol on opening of the Guyana equatorial site of <u>Cecles/Eldo</u> between the French government and Eldo.
17 November	French laser reflector deposited on moon by <u>Luna XVII</u> . First laser echo received by Pic du Midi (Hautes Pyrenees) observatory on 5 December 1970.
12 December	Orbiting of French Peole satellite by Diamant B launch vehicle, with double mission: — to allow a flight test of new techniques and equipment to be used in later programs. — to support a world program of geodesic observation (ISAGEX) in which sixteen nations will participate CNES to serve as project chief.
16 December	Agreement with Spain signed for installation and utilization by France of an optical satellite observation station with a laser telemeter to be located in San Fernando (Spain).

31 December

Successful stabilization of Peole satellite  
after rotating orbit 180° to orient its  
UHF communication system toward the earth.